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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MICHAEL J. STRIKER 103 EAST NECK ROAD HUNTINGTON, NY 11743			EXAMINER MOK, ALEX W	
			ART UNIT	PAPER NUMBER
			2834	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/591,844

Applicant(s)

MALDENER ET AL.

Examiner

Alex W. Mok

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration. .
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/5/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 5, 6, 9, 14 and 17 objected to because of the following informalities:
there is no antecedent basis for the terms "the spring element" in claims 5 and 17, "the radial raised areas" in claim 6, "the raised areas" in claim 9, and "the axial shoulder" in claim 14. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 5, 7-9, 11, 15, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 5, 7-9, 11, and 17, the phrase "in particular", and the phrase "especially" in claim 15, does not definitively point out and distinctly claim the invention, and therefore render the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 10, 11, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrle et al. (WIPO Document No.: WO 3067742 A1), and further in view of Oberle et al. (German Patent Document No.: DE 100 53 245 A1).

For claim 1, Wehrle et al. disclose a rotor of an electrical machine having at least one permanent magnet (reference numeral 2, see figure 1), which is embodied as a hollow cylinder and which has axial contact faces that cooperate with corresponding axial clamping faces (reference numeral 7) of at least one retaining element (reference numeral 4), with which element the permanent magnet is secured to the rotor (see figure 1). Wehrle et al. do not specifically teach at least one of the clamping faces having a knurling extending in the radial direction.

Oberle et al. teach a holding element (reference numeral 23, figures 4, 5) having a knurling extending in the radial direction.

It would have been obvious to have this configuration, since the invention of Oberle et al. is related to securing components to the rotor (see the Abstract), the same problem the claimed invention is concerned with, therefore enabling a person of ordinary skill in the art to use this technique in the invention of Wehrle et al.

For claim 2, Oberle et al. teach the knurling having radial grooves and axially pointed raised areas which extend in the radial direction (see figure 4), and it would have been obvious to include this for the reasons given above for claim 1.

For claim 3, Wehre et al. teach the retaining element having a ring element (see figures 1-3), on whose axial side, the clamping face is integrally formed (see figures 1-3).

For claim 4, Wehrle et al. teach the retaining element having a spring element (reference numeral 7, see figures 2, 3), which presses the clamping face against the contact face with a contact pressure (figure 1).

For claim 5, Wehrle et al. teach the spring element (reference numeral 7, see figures 2, 3) being braced axially and radially on the retaining element and elastically supporting the permanent magnet (see figure 1).

For claim 6, since it would have been obvious to have the radial raised areas as explained for claim 2 above, then it would have been obvious for a person skilled in the art to include this in the invention of Wehrle et al. and have it engage the inside of the contact face of the permanent magnet for the purpose of transmitting a torque between the permanent magnet and the retaining element and/or to center the permanent magnet radially to the rotor.

For claim 10, Wehrle et al. disclose the rotor having a rotor shaft (reference numeral 3), embodied as a magnetic short circuit (see figure 1), which is surrounded by a ring element that has the clamping face (reference numeral 7).

For claim 11, Wehrle et al. teach the retaining element having a radial collar (reference numeral 5, see figure 1) on which the permanent magnet can be braced for radial precentering.

For claim 13, Wehrle et al. teach the retaining element being embodied as a sleeve with an axial shoulder on which the contact face is braced (see figure 1).

For claim 14, Wehrle et al. illustrate the axial shoulder of the retaining element being embodied as the clamping face (see figure 1).

For claim 15, it would have been obvious to make the permanent magnet, on its inside face, have extensions with which the permanent magnet is pressed against the sleeve for precentering, since this would involve a mere change in the shape of the component, and this claimed configuration is just one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of securing components of an invention. *In re Dailey* 149 USPQ 47, 50 (CCPA 1966). See also *Glue Co. v. Upton* 97 US 3,24 (USSC 1878).

For claim 16, it would have been obvious to have the retaining element be embodied as a magnetic short circuit, since this would involve a mere change in the position of a component, and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

For claim 17, Wehrle et al. teach the spring element being embodied as a speed nut (reference numeral 7, see figures 1-3), which is braced directly on the sleeve and in particular rests directly on one of the contact faces (see figure 1).

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrle et al. and Oberle et al. as applied to claim 1 above, and further in view of Oshima et al. (US Patent Application Pub. No.: US 2004/0046469 A1).

For claim 7, the inventions of Wehrle et al. and Oberle et al. teach the claimed invention except for the permanent magnet being manufactured of sintered material or plastic-bonded material.

Oshima et al. disclose a rotor having magnets of sintered material (see paragraph [0054], and figure 4).

It would have been obvious to include this configuration for the magnets, since the invention of Oshima et al. is related to rotors for electrical machines, and a person of ordinary skill in the art would have been able to make the magnets out of a known material for its suitability in the invention, such as the material taught by Oshima et al.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrle et al. and Oberle et al. as applied to claim 1 above, and further in view of Hamamura et al. (US Patent Application Pub. No.: US 2004/0051415 A1).

For claim 8, it would have been obvious to make the permanent magnet have a coating, since the reference of Hamamura et al. disclose resin coating (see paragraph [0004]), and it would have been within the knowledge of a person of ordinary skill in the art to select a coating that is softer than the material of the raised areas for the purpose of protecting the magnet against corrosion.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrle et al. and Oberle et al. as applied to claim 1 above, and further in view of Montagu (US Patent No.: 5936324).

For claim 9, it would have been obvious to have the raised areas be manufactured of harder material than the permanent magnet or the coating, and have a coefficient of thermal expansion that is adapted to the permanent magnet used, since this would involve selecting a preferred material to form a component, which has been held to be within the general skill of a worker in the art. Also the invention of Montagu teaches a rotor in which the ends that are supporting the magnet are made of a certain coefficient of thermal expansion that would adapt to the permanent magnet (column 3, lines 47-52).

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrle et al. and Oberle et al. as applied to claim 1 above, and further in view of Huynh (US Patent No.: 5942829).

For claim 12, it would have been obvious to have the retaining element be fixed on the rotor shaft by means of securing rings, spring components, laser welding, adhesive bonding, material deformation, or shrink-fitting, since these types of fixing means are well known in the art at the time the invention was made, such as shrink fitting as exhibited by Huynh (see column 4, lines 15-17).

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrle et al. and Oberle et al. as applied to claim 1 above, and further in view of Suzuki et al. (US Patent Application Pub. No.: US 2002/0130577 A1).

For claim 18, it would have been obvious to have the permanent magnet cooperate with a Hall sensor, since Suzuki et al. teach a rotor with a magnet cooperating with a Hall sensor (see paragraph [0037]), and a person of ordinary skill in the art would have been able to have this configuration for the purpose of detecting the rotational position of the rotor.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex W. Mok whose telephone number is (571) 272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Alex W. Mok
Examiner
Art Unit 2834

AM

10/21/2010
SUPERVISOR
10/21/2010